Claims:

1. A method of detecting blood flow abnormality or variation in a human or non-human body, said method comprising administering into the systemic vasculature of a said body a contrast enhancing amount of an intravascular paramagnetic metal containing magnetic resonance imaging contrast agent, subjecting said body to a magnetic resonance imaging procedure capable of generating from magnetic resonance signals from said body a series of temporally spaced images of at least a part of said body into which said agent passes, and detecting temporal variations in said signals or images whereby to identify regions of abnormal or modified blood flow in said body and to indicate the degree of blood flow abnormality or modification therein.

2. A method according to claim 1 wherein said contrast agent comprises a physiologically tolerable complex of a paramagnetic lanthanide ion or a physiologically tolerable salt of such a chelate.

3. A method according to claim 2 wherein said contrast agent is a chelate complex of a metal ion selected from the paramagnetic ions of Yb, Tm, Dy, Ho, Er and Gd, or a physiologically tolerable salt thereof.

4. A method according to claim 3 wherein said contrast agent is a chelate complex of Dy(III) or a physiologically tolerable salt thereof.

5. A method according to any one of claims 1 to 4 wherein said contrast agent comprises a physiologically tolerable non-ionic paramagnetic lanthanide chelate complex.

6. A method according to any one of claims 2 to 5 wherein said chelate complex is a complex of a linear, branched or macrocyclic chelant selected from polyaminopolycarboxylic acid chelants and from chelants wherein one or more carboxylic acid groupings are replaced with an amide, ester or hydroxamate grouping.

7. A method according to claim 6 wherein said chelate complex is a complex of a chelant selected from the group consisting of DTPA, DTPA-BMA, DOTA, DO3A, DTPA-BMO and HP-DO3A.

8. A method according to claim 2 wherein said chelate complex is DyDTPA-BMA.

9. A method according to any one of claims 1 to 8 wherein said contrast agent is administered at a dosage of 0.02 to 3 mmol/kg bodyweight.

10. A method according to claim 9 wherein said contrast agent is administered at a dosage of 0.08 to 0.5 mmol/kg.

11. A method according to any one of claims 1 to 10 wherein said magnetic resonance imaging procedure is a fast imaging procedure.

12. A method according to claim 11 wherein said procedure is one having an image acquisition time of less than 5 seconds.

13. A method according to claim 12 wherein said procedure is one having an image acquisition time of less than 0.5 seconds.

14. A method according to any one of claims 1 to 13 wherein said procedure is an echo planar imaging procedure.

15. A method according to any one of claims 1 to 10 comprising generating temporally spaced T_2* or T_2-weighted images.

16. A method according to claim 15 wherein said magnetic resonance imaging procedure is a spin-echo or gradient echo procedure.

17. A method according to either of claims 15 and 16 comprising generating and comparing T_1-weighted images or signals transformable thereto and T_2* or T_2-weighted images or signals transformable thereto whereby to identify body regions in which blood perfusion occurs.

18. A method according to any one of claims 1 to 17 being a method of detecting body regions of blood flow deficit.

19. A method according to claim 18 being a method of detecting ischemic regions.

20. A method according to claim 18 being a method of detecting body regions in which blood perfusion is surgically, thermally or chemically modified.

21. A method according to claim 1 wherein said contrast agent comprises a physiologically tolerable complex of a paramagnetic transition metal ion or a physiologically tolerable salt of such a chelate.

22. A method of detecting and quantitatively evaluating the severity of ischemias in a human or non-human body, said method comprising administering into the systemic vasculature of said body a contrast enhancing amount of an intravascular paramagnetic metal containing magnetic susceptibility magnetic resonance imaging contrast agent, subjecting said body to a magnetic resonance imaging procedure capable of

generating from magnetic resonance signals from said body a series of temporally spaced images of at least a part of said body into which said agent passes, and detecting temporal variations in said signals or images whereby to detect ischemic tissue and to provide a quantitative indication of the degree of blood perfusion deficit therein.

23. A method of monitoring the vasodilatory or vasoconstrictive effects of a physiologically active substance administered to a human or non-human animal body said method comprising administering said substance into said body, administering into the systemic vasculature of said body a contrast enhancing amount of an intravascular paramagnetic metal containing magnetic susceptibility magnetic resonance imaging contrast agent, subjecting said body to a magnetic resonance imaging procedure capable of generating from magnetic resonance signals from said body a series of temporally spaced images of at least a part of said body into which said agent passes, and detecting temporal variations in said signals or images whereby to monitor the vasoconstriction or vasodilation induced by said substance.

24. A method of monitoring surgically induced blood perfusion variations said method comprising administering a contrast enhancing amount of an intravascular paramagnetic metal containing mass magnetic susceptibility magnetic resonance imaging contrast agent into the systemic vasculature of a human or animal body which is undergoing or has undergone surgery, subjecting said body to a magnetic resonance imaging procedure capable of generating from magnetic resonance signals from said body a series of temporally spaced images of at least a part of said body into which said agent passes, and detecting temporal variations in said signals or images whereby to identify

regions of surgically induced variations in blood perfusion.

25. A method as claimed in any one of claims 1 to 24 wherein said contrast agent is administered as a contrast medium composition comprising DyDTPA-BMA and CaNaDTPA-BMA in a molar ratio of about 20:1.

26. The use of a paramagnetic metal containing compound for the manufacture of a contrast agent composition for use in a method as claimed in any one of claims 1 to 25.

27. Use as claimed in claim 26 of DyDTPA-BMA.

add B'7

add C'7